THE CLAIMS

1. (Original) A method of testing a pair of thin films, each thin film being formed by a material desired for use as a different one of a pair of contact materials, to obtain information that is usable in a determination whether at least one of the pair of contact materials is appropriate for use as a contact material in a switch, comprising:

performing at least one atomic force microscopy measurement relating to a predetermined characteristic of the pair of contact materials on the pair of thin films after they contact each other with a first controlled force.

2. (Currently Amended) The method according to claim 1 wherein:

the predetermined characteristic is a contact resistance; and

the step of performing the atomic force microscopy measurement comprises obtaining a contact resistance value between the pair of thin films when the pair of thin films contact each other with the first controlled force.

3. (Currently Amended) The method according to claim 1 wherein:

the predetermined characteristic is a current-dependent stiction force; and

the step of performing the atomic force microscopy measurement comprises obtaining a stiction force value between the pair of thin films after the pair of thin films contact each other with the first controlled force between the thin films.

4. (Currently Amended) The method according to claim 1 ~~wherein the characteristic is whether the pair of thin films are conductors~~ wherein the predetermined characteristic is resistivity.

5. (Currently Amended) The method according to claim 1 ~~wherein the characteristic is whether the pair of thin films are non-conducting~~ wherein the predetermined characteristic is conductivity.

6. (New) The method according to claim 4, wherein the step of performing comprises:

obtaining a resistance value for the pair of thin films when the pair of thin films contact each other due to the first controlled force; and

calculating a corresponding resistivity value.

7. (New) The method according to claim 6 further comprising evaluating the resistivity value to determine if the pair of thin films is a conductor appropriate for use in the switch.

8. (New) The method according to claim 5, wherein the step of performing comprises:

obtaining a conductance value for the pair of thin films when the pair of thin films contact each other due to the first controlled force; and

calculating a corresponding conductivity value.

9. (New) The method according to claim 8 further comprising evaluating the conductivity value to determine if the pair of thin films is a conductor appropriate for use in the switch.

10. (New) A system for testing a pair of thin films to determine whether at least one of a pair of contact materials is appropriate for use as a contact material in a switch, wherein each thin film is formed from a material to be tested as a different one of the pair of contact materials, comprising:

a base for receiving a thin film of a first contact material;

a pressure member comprising a curved contacting surface, wherein the pressure member is adapted to transmit a desired force through the curved contacting surface to the first layer and the contacting surface is adapted to receive a thin film of a second contact material; and

a controller electrically coupled and mechanically connected to the base and the pressure member, wherein the controller performs at least one atomic force microscopy measurement relating to a predetermined characteristic of the thin films of the first and second contact materials upon contacting each other in response to a first controlled force.

11. (New) The system of claim 10, wherein the base is adapted by deposition of a substrate comprising at least one layer of a conductive material.

12. (New) The system of claim 11, wherein the substrate further comprises at least one layer of non-conductive material.

13. (New) The system of claim 10, wherein the curved contacting surface is adapted by deposition of a substrate comprising at least one layer of a conductive material.

14. (New) The system of claim 13, wherein the substrate further comprises at least one layer of a non-conductive material.

15. (New) The system of claim 10, wherein the surface of the first contact material is etched by an acid solution.

16. (New) The system of claim 10, wherein the surface of the second contacted material is etched by an acid solution.

17. (New) The system of claim 10, wherein the curved contacting surface is rounded.